System Testing Group-29

Software Engineering

1. Signup Test:

Email Constraints:

Should contain the '@' sign with characters both before and after it.

Should not already be registered.

Password Constraints:

Must contain at least one capital letter [A-Z].

Must contain at least one small letter [a-z].

Must contain at least one number [0-9].

Must contain at least one special character [!@#\$%^&*].

Must be between 8-12 characters in length.

Password Confirmation:

Must exactly match the Password.

Name Constraints:

Must contain at least two characters.

Cannot be empty.

Phone Number Constraints:

Must be exactly 10 digits long.

Must contain only numeric characters.

Equivalence Class Partitioning:

Each attribute in the equivalence table that satisfies its constraints is

considered a valid input.

Attributes that fail to meet their constraints are considered invalid inputs.

Equivalence Class Partition:

Test Case	Na	Em	Passw	Confirm	Mobile	Res
(ECP)	me	ail	ord	Password	Number	ult
E1	Vali	Vali	Valid	Valid	Valid	Succ
	d	d				ess
E2	Vali	Vali	Valid	Invalid	Valid	Error
	d	d				
E3	Vali	Vali	Valid	Invalid	Invalid	Error
	d	d				
E4	Vali	Vali	Invalid	Valid	Valid	Error
	d	d				

E5	Vali	Vali	Invalid	Invalid	Valid	Error
	d	d				
E6	Vali	Vali	Invalid	Invalid	Invalid	Error
	d	d	Lanca Ital	Lanca Cal	loo oo li al	F
E7	Vali	Vali	Invalid	Invalid	Invalid	Error
E8	d Vali	d Vali	Invalid	Invalid	Invalid	Error
EO	d	d	IIIvaliu	IIIvaliu	IIIvaliu	EIIOI
E9	Vali	Inva	Valid	Valid	Valid	Error
LJ	d	lid	Valid	Valia	Vatio	Liioi
E10	Vali	Inva	Valid	Valid	Invalid	Error
	d	lid	Valid	, valid	au	2
E11	Vali	Inva	Valid	Invalid	Valid	Error
	d	lid				
E12	Vali	Inva	Valid	Invalid	Invalid	Error
	d	lid				
E13	Vali	Inva	Invalid	Valid	Valid	Error
	d	lid				
E14	Vali	Inva	Invalid	Valid	Invalid	Error
	d	lid	_			
E15	Vali	Inva	Invalid	Invalid	Valid	Error
	d	lid				
E16	Vali	Inva	Invalid	Invalid	Invalid	Error
F47	d	lid	Malia	Malia	\/_1:_l	F
E17	Inva	Vali	Valid	Valid	Valid	Error
E18	lid Inva	d Vali	Valid	Invalid	Valid	Error
LIO	lid	d	valiu	Ilivatiu	Vatiu	LIIOI
E19	Inva	Vali	Invalid	Valid	Valid	Error
		d	mvada	Valid	Vatia	21101
E20	Inva	Vali	Invalid	Invalid	Invalid	Error
	lid	d				
E21	Inva	Vali	Invalid	Valid	Invalid	Error
	lid	d				
E22	Inva	Vali	Invalid	Invalid	Valid	Error
	lid	d				
E23	Inva	Vali	Invalid	Invalid	Invalid	Error
	lid	d				
E24	Inva	Inva	Valid	Valid	Valid	Error
	lid	lid				
E25	Inva	Inva	Valid	Valid	Invalid	Error
	lid	lid				

E26	Inva	Inva	Valid	Invalid	Valid	Error
	lid	lid				
E27	Inva	Inva	Valid	Invalid	Invalid	Error
	lid	lid				
E28	Inva	Inva	Invalid	Valid	Valid	Error
	lid	lid				
E29	Inva	Inva	Invalid	Valid	Invalid	Error
	lid	lid				
E30	Inva	Inva	Invalid	Invalid	Valid	Error
	lid	lid				
E31	Inva	Inva	Invalid	Invalid	Invalid	Error
	lid	lid				
E32	Inva	Inva	Invalid	Invalid	Invalid	Error
	lid	lid				

Boundary Value Analysis:

E-mail	Pass	Confirm	Z	Phone	Expecte	Actual	Reason
	word	Passwor	а	Numbe	d	Outpu	
		d	m	r	Output	t	
			е				
a@	Abcd	Abcd@12	J	123456	fail	fail	Email constraint (too
	@123	3	0	7890			short)
<u>b@dom</u>	Abcd	Abcd@12	Α	123456	fail	fail	Email constraint
ain.com	@123	34	n	7890			(missing domain
	4						part)
abc@do	Abcd	Abcd@12	J	123456	success	succes	Valid case
main.co	@123	34	0	7890		S	
<u>m</u>	4		h				
			n				
abc@do	abcd1	abcd123	Α	123456	fail	fail	Password constraint
m.com	23		n	7890			(too weak)

abc@do main.co m	ABCD @123 4	ABCD@1 234	J o h	123456 7890	success	succes s	All constraints met
abc@do main.co m	Abcd @123	Abcd@12 34	J o	123456 7890	fail	fail	Password not match
abc@do main.co m	Abcd @123	Abcd@12 3	A n	123456 7890	success	succes s	All constraints met
abc@do main.co m	Abcd @123 4	Abcd@12 34	J O	123456 7890	success	succes s	All constraints met
abc@do main.co m	ABCD @123 4	ABCD@1 234	J O	123456 7890	success	succes s	All constraints met
xyz@do main.co m	abc12 34	abc1234	O	123456 7890	fail	fail	Password constraint (too weak)
abc@do main.co m	Ab1cd @123 4	Ab1cd@1 234	J	123456 7890	success	succes s	All constraints met
abc@do main.co m	Abcd @12	Abcd@12	J	123456 7890	fail	fail	Name too short
abc@do main.co m	Abcd @123 4	Abcd@12 34	J o h n	12345	fail	fail	Phone number too short
abc@do main.co m	Abcd @123 4	Abcd@12 34	J o h n	123456 789012 34	fail	fail	Phone number too long
abc@do main.co m	Abcd @123 4	Abcd@12 34	J o h n	abcdefg hijkl	fail	fail	Phone number not numeric
abc@do main.co m	Abcd @123 4	Abcd@12 34	J O	123456 7890	success	succes s	All constraints met

2. Login Test:

Email constraint:

Required field (cannot be empty), already registered.

Password constraint:

Required field (cannot be empty) (not checking for another constraints as it is

already stored in database)

Equivalence class partitioning:

Note: Each attribute of the equivalence table which satisfies their constraints is

considered as the valid input otherwise it will be considered as invalid input.

Equivalence Class Partition:

Equivalence	Email	Passwor	Result
Class		d	
E1	Valid	Valid	Succes
			S
E2	Valid	Invalid	Error
E3	Invalid	Valid	Error
E4	Invalid	Invalid	Error

Boundary Value Analysis:

Test Case	Email	Password	Expec ted Outpu	Actu al Outp	Reason
			ť	ut	
Valid	abc@gmail.com	Password123	Succe	Succ	Both email and password
Case 1			SS	ess	are valid
Valid Case 2	xyz123@gmail.c om	Password123	Succe ss	Succ ess	Valid email, valid password
Invali d Case 1	111	Password123	Error	Error	Empty email (required field)
Invali d Case 2	abc@gmail.com	""	Error	Error	Empty password (required field)
Invali d Case 3	abc@gmail.com	Pass	Error	Error	Password too short (assuming length constraint)
Invali d Case 4	abc@gmail.com	Password123 4	Error	Error	Password exceeds maximum length (if constraint exists)
Invali d Case 5	already_register ed@gmail.com	Password123	Error	Error	Email already registered
Boun dary Case 1	a@b@gmail.co m	Р	Error	Error	Minimum valid email (edge case)
Boun dary Case 2	abcdefghijklmno pqrstuvwx@gma il.com	P	Succe ss	Succ ess	Maximum length valid email (assuming max length constraint)
Boun dary	abc@gmail.com	Р	Error	Error	Minimum valid password (assuming length constraint)

Case					
3					
Boun	abc@gmail.com	Password123	Succe	Succ	Maximum length valid
dary		45678901234	SS	ess	password
Case		567890			
4					

3. Book A Parking Slot Test:

Attributes:

- 1. Date: The date when the parking slot is being booked.
- 2. Select Time: The time slot during which the parking slot will be used.
- 3. Duration (hours): The duration for which the parking slot is booked, in hours.
- 4. Vehicle Number Plate: The vehicle's registration number plate.

Constraints:

- 1. Date Constraints:
- Valid Date: Should be a valid date in the future (i.e., after today's date).

- Invalid Date: A date in the past or an invalid date format (e.g., 30/02/2024).
- 2. Select Time Constraints:
- Valid Time: The time should be in a 24-hour format (e.g., 14:00 or 23:45).
- Invalid Time: Any time in an incorrect format (e.g., 25:00 or 12:60).
- 3. Duration (hours) Constraints:
- Valid Duration: Must be a positive number, typically between 1 and 24 hours.
- Invalid Duration: Duration less than 1 hour or more than 24 hours (e.g., 0 hours or

25 hours).

- 4. Vehicle Number Plate Constraints:
- Valid Plate: Must follow the specific number plate format (e.g., ABC1234 or AB

1234 CD depending on local rules).

• Invalid Plate: A number plate that does not match the required format (e.g., 1234 or

AB123).

Equivalence Class Partitioning (ECP):

- Valid Date: A valid future date.
- Invalid Date: A date in the past or incorrectly formatted.
- Valid Time: A valid time in the 24-hour format.
- Invalid Time: An incorrect time format or an invalid time value.
- Valid Duration: A positive duration between 1 and 24 hours.
- Invalid Duration: A duration of less than 1 hour or more than 24 hours.
- Valid Vehicle Number Plate: A number plate that follows the correct format.
- Invalid Vehicle Number Plate: A number plate that does not match the required

Format.

Tes t	Dat e	Select Time	Duration (hours)	Vehicle Number	Expecte d	Reason
Ca				Plate	Output	
se						
E1	Vali	Valid	Positive	Valid format	Success	All attributes are valid
	d		(1-24)	(ABC1234)		
	futur					
	е					
E2	Past	Valid	Positive	Valid format	Error	Date is in the past
	date		(1-24)	(ABC1234)		
E3	Vali	Invalid	Positive	Valid format	Error	Invalid time format
	d	format	(1-24)	(ABC1234)		

	futur					
	е					
E4	Vali	Valid	Zero or	Valid format	Error	Duration is invalid
	d		negative	(ABC1234)		
	futur					
	е	N 11 1			_	5
E5	Vali	Valid	Greater	Valid format	Error	Duration exceeds system
	d		than 24	(ABC1234)		limit
	futur					
E6	e Vali	Valid	Positive	Invalid	Error	Invalid vehicle number
_ E0	d	valiu	(1-24)	format	EIIOI	plate format
	futur		(1-24)	(1234)		ptate format
	e			(1204)		
E7	Vali	Minimu	Minimum	Valid format	Success	Tests minimum valid
	d	m	(1 hour)	(ABC1234)		values for time/duration
	futur	(00:00)				
	е					
E8	Vali	Maximu	Maximum	Valid format	Success	Tests maximum valid
	d	m	(24 hours)	(ABC1234)		values for time/duration
	futur	(23:59)				
	е				_	
E9	Vali	Typical	Typical (1	Valid format	Success	Valid normal case with
	d	(12:00)	hour)	(ABC1234)		typical values
	futur					
F10	e Doot	Typical	Typical (1	Valid format	Error	Data is in the next
E10	Past date	Typical (12:00)	Typical (1 hour)	(ABC1234)	EIIOI	Date is in the past
E11	Vali	Invalid	Typical (1	Valid format	Error	Invalid time format
	d	(25:00)	hour)	(ABC1234)	LITOI	(greater than 24 hours)
	futur	(20.00)	liour,	(//.001204)		(greater than 24 floars)
	е					
E12	Vali	Typical	Invalid (0	Valid format	Error	Duration less than the
	d	(12:00)	hours)	(ABC1234)		minimum
	futur					
	е					
E13	Vali	Typical	Invalid (25	Valid format	Error	Duration exceeds the
	d	(12:00)	hours)	(ABC1234)		maximum
	futur					
	е					

Boundary Value Analysis:

Test Case	Date	Select Time	Duratio n (Hours)	Vehicle Number Plate	Expecte d Output	Actual Output	Reason
Valid Case 1	2024-12- 02	14:00	4	GJ01AB1 000	Success	Success	All Attribute s are valid.
Valid Case 2	2024-12- 05	23:59	2	GJ01CD 1000	Success	Success	All Attribute s are valid.
Invalid Case 1	2024-11- 30	12:00	5	GJ01AB1 000	Error	Error	Date is in the past.
Invalid Case 2	2024-12- 01	25:00	3	GJ1000A B	Error	Error	Invalid time format.
Invalid Case 3	2024-12- 03	10:30	0	GJ01AB1 000	Error	Error	Invalid duration (0 hours).
Invalid Case 4	2024-12- 04	12:00	25	GJ1000A B	Error	Error	Invalid duration (More than 24 hours)
Boundar y Case 1	2024-12- 01	00:00	1	GJ01AB1 000	Success	Success	All Attribute s are valid.
Boundar y Case 2	2024-12- 02	23:59	24	GJ01AB1 000	Success	Success	All Attribute s are valid.

Boundar	2024-12-	12:00	1	GJ01AB1	Success	Success	All
y Case 3	03			000			Attribute
							s are
							valid.
Boundar	2024-12-	12:00	26	GJ1000A	Error	Error	Invalid
y Case 4	02			В			vehicle
							number
							plate
							format.

Feedback Test Description

The Feedback Test is designed to validate the user input for the feedback form, where users can provide feedback for a system or service. The form contains the following fields:

1. Name:

- a. Constraint: The name must be at least 2 characters long.
- b. Reason: To ensure that the user provides a meaningful name and does not submit a blank or incomplete entry.
- c. Valid Input: Any name with 2 or more characters (e.g., "John", "Alice").
- d. Invalid Input: A name with fewer than 2 characters (e.g., "A", ""). This will trigger an error.

2. Email:

- a. Constraint: The email must be in a valid format and contain the "@" symbol. It must also be properly structured with text before and after the "@" symbol (e.g., abc@gmail.com).
- b. Reason: To ensure that the email provided by the user is in a valid, recognizable format. An invalid email may cause issues with communication or identification.
- c. Valid Input: A correctly formatted email address (e.g., "john.doe@gmail.com").
- d. Invalid Input: An improperly formatted email address (e.g., "abc@gmail", "plainaddress"). This will trigger an error.

3. Feedback:

- a. Constraint: The feedback text must not be empty. It should contain at least one character.
- b. Reason: To ensure that the user provides meaningful feedback and the field is not left blank. This also helps prevent submission of an incomplete form.
- c. Valid Input: Any non-empty text (e.g., "Great service!", "Very helpful").
- d. Invalid Input: An empty feedback field (i.e., no text entered). This will trigger an error.

4. Rating:

- a. Constraint: The rating must be selected from a set of options ranging from 1 to 5, and it must be selected (cannot be left empty).
- b. Reason: To ensure that the user provides a rating, which is essential for feedback analysis. The system will not accept blank or invalid ratings.
- c. Valid Input: A selected rating between 1 and 5 (e.g., 1, 2, 3, 4, or 5).
- d. Invalid Input: No rating selected (empty or missing selection). This will trigger an error.

Boundary Value Analysis:

Test Case	Name	Email	Feed	Ratin	Expec	Reason
			back	g	ted	
					Outp	
					ut	

Valid	Valid name	Valid email	Valid	Rating	Succe	Tests the lower
Boundary	(exactly 2	(e.g.,	feed	= 1	SS	boundary for rating
Case 1	chars)	abc@gmail.c	back			(1)
		<u>om</u>)				
Valid	Valid name	Valid email	Valid	Rating	Succe	Tests the upper
Boundary	(2+ chars)	(e.g.,	feed	= 5	SS	boundary for rating
Case 2		abc@gmail.c	back			(5)
		<u>om</u>)				
Valid	Valid name	Valid email	Valid	Rating	Succe	Tests a valid middle
Boundary	(2+ chars)	(e.g.,	feed	= 3	SS	boundary rating (3)
Case 3		abc@gmail.c	back			
		<u>om</u>)				
Invalid	Empty	Valid email	Valid	No	Error	Invalid name length
Boundary	name (0	(e.g.,	feed	rating		(required field)
Case 1	chars)	abc@gmail.c	back	select		
		<u>om</u>)		ed		
Invalid	Name with	Valid email	Valid	No	Error	Invalid name length
Boundary	1	(e.g.,	feed	rating		(minimum required
Case 2	character	abc@gmail.c	back	select		2 chars)
		<u>om</u>)		ed		
Invalid	Valid name	Invalid email	Valid	No	Error	Invalid email format
Boundary	(2 chars)	(e.g.,	feed	rating		
Case 3		abc@gmail)	back	select		
				ed		
Invalid	Valid name	Valid email	Empt	No	Error	Feedback is empty
Boundary	(2+ chars)	(e.g.,	У	rating		(required)
Case 4		abc@gmail.c	feed	select		
		<u>om</u>)	back	ed		
Invalid	Valid name	Valid email	Valid	No	Error	Rating is not
Boundary	(2+ chars)	(e.g.,	feed	rating		selected (required)
Case 5		abc@gmail.c	back	select		
		<u>om</u>)		ed		

Equivalence Class Partition:

Test Case	Name	Email	Feedback	Rating	Expec ted	Reason
(ECP)					Outpu t	
E1	Valid name	Valid email (e.g.,	Valid feedback	Rating 1-5	Succe ss	All attributes are valid.
	(2+	abc@gmail.co	(non-	1-3	33	vada.
	chars)	<u>m)</u>	empty)			
E2	Empty	Valid email	Valid	Rating	Error	Name is empty
	name	(e.g.,	feedback	select		(required field).
		abc@gmail.co		ed		
		<u>m</u>)				
E3	Valid	Invalid email	Valid	Rating	Error	Invalid email
	name	(e.g.,	feedback	select		format.
	(2+	abc@gmail)		ed		
F4	chars)	Valid and il	Francis to a	Dating	Г.,,,,,,,,,	Canalla anti in amantu
E4	Valid	Valid email	Empty feedback	Rating select	Error	Feedback is empty
	name (2+	(e.g., abc@gmail.co	reedback	ed		(required field).
	chars)	m)		Gu		
E 5	Valid	Valid email	Valid	No	Error	Rating is not
	name	(e.g.,	feedback	rating		selected (required
	(2+	abc@gmail.co		select		field).
	chars)	<u>m</u>)		ed		
E6	Empty	Invalid email	Empty	No	Error	Name is empty and
	name	(e.g.,	feedback	rating		invalid email
		abc@gmail)		select		format.
F7	Mana	Validamail	Valid	ed	Гииои	Nama langth is
E7	Name with 1	Valid email	Valid feedback	Rating select	Error	Name length is invalid (minimum
	characte	(e.g., abc@gmail.co	TECUDACK	ed		required 2).
	r	m)		Ju		10441104 2).
E8	Valid	Valid email	Valid	No	Error	Rating is required
	name	(e.g.,	feedback	rating		but not selected.
	(2+	abc@gmail.co		select		
	chars)	<u>m</u>)		ed		

5. Forgot Password:

Constraints
1. Email:
Must be a valid email address.
Required field; cannot be empty.
2. OTP:
Must be exactly 6 digits.
Required field.
3. New Password:
Required field.

Must be at least 8 characters long.

4. Confirm Password:

Must match the new password.

Equivalence Class Partitioning:

Attribute	Valid Cases	Invalid Cases
Email	Valid email (e.g.,	Invalid format (e.g.,
	user@mail.com)	'user@', 'user.com'), Empty
ОТР	6 digits (e.g., 123456)	Less/more than 6 digits (e.g.,
		12345, 1234567), Non-numeric
New	At least 8 characters	Less than 8 characters (e.g.,
Password	(e.g., Abcd1234)	Abcd123), Empty
Confirm	Matches New	Does not match New
Password	Password	Password

Boundary Value Analysis:

Test Case	Email	ОТР	New Passwo rd	Confir m Passwo rd	Expected Output	
Valid case	user@mail .com	1234 56	Abcd@ 123	Abcd@ 123	Success	
Empty Email	(empty)	1234 56	Abcd@ 123	Abcd@ 123	Fail: Email is required	
Invalid Email	user@mail	1234 56	Abcd@ 123	Abcd@ 123	Fail: Invalid email format	
OTP less than 6 digits	user@mail .com	1234 5	Abcd@ 123	Abcd@ 123	Fail: OTP must be 6 digits	
OTP more than 6 digits	user@mail .com	1234 567	Abcd@ 123	Abcd@ 123	Fail: OTP must be 6 digits	
OTP non-numeric	user@mail .com	abc12 3	Abcd@ 123	Abcd@ 123	Fail: OTP must be numeric	
Password too short	user@mail .com	1234 56	Abc123	Abc123	Fail: Password too short	
Passwords mismatch	user@mail .com	1234 56	Abcd@ 123	Abcd12 3	Fail: Passwords do not match	
Empty New Password	user@mail .com	1234 56	(empty	(empty	Fail: New Password is required	
Empty Confirm Password	user@mail .com	1234 56	Abcd@ 123	(empty	Fail: Confirm Password required	

Acceptance Testing

1. Sign up:

Test: 1

Name: Devam Patel

Email: pdevamgmail.com

password: Abc@1234

Confirm password: Abc@1234 Phone Number: 9428565959



Test: 2

Name: Vraj Patel

Email: vraj_email@gmail.com

password: Ab

Confirm password: Ab

Phone Number: 1234567890



Test: 3

Name: Vraj Patel

Email: vraj_email@gmail.com

password: Abc@1234

Confirm password: Cba@1234 Phone Number: 1234567890



Test: 4 Name: V

Email: vraj_email@gmail.com

password: Abc@1234

Confirm password: Abc@1234 Phone Number: 1234567890



Test: 5

Name: Vraj

Email: vraj_email@gmail.com

password: Abc@1234

Confirm password: Abc@1234

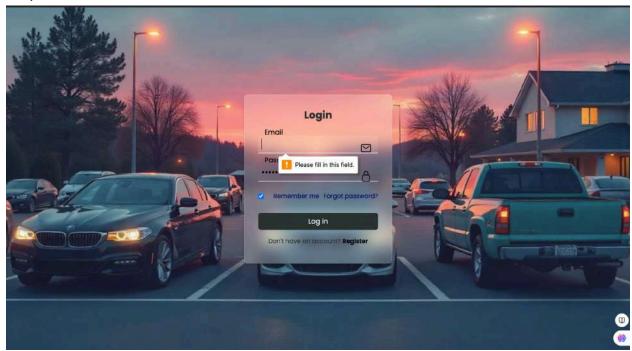
Phone Number: 12345



2.Login

Test-1 Email:

Password:Abc@1234



Email: pvraj7075@gmail.com

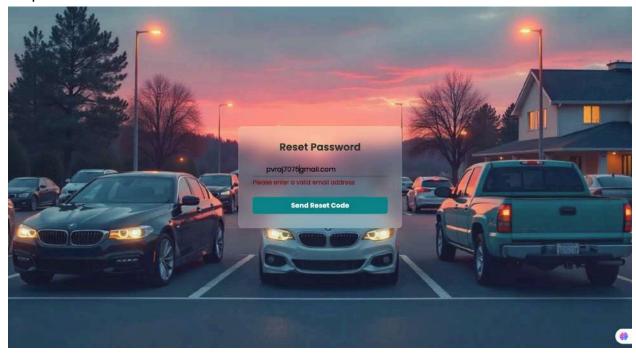
Password: Output: Invalid



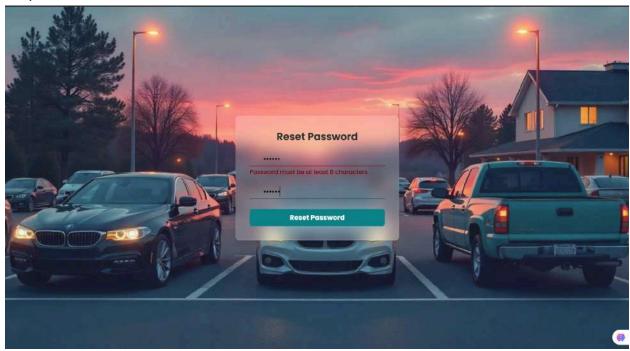
3.Forgot Password

Test-1

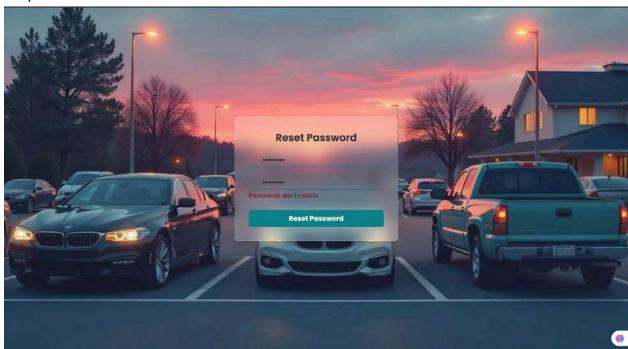
Email: pvraj7075gmail.com Output: Invalid



New_password: Abc@12 Confirm_password: Abc@12
Output: Invalid



New_password: Abc@1234 Confirm_password: Cba@1234
Output: Invalid



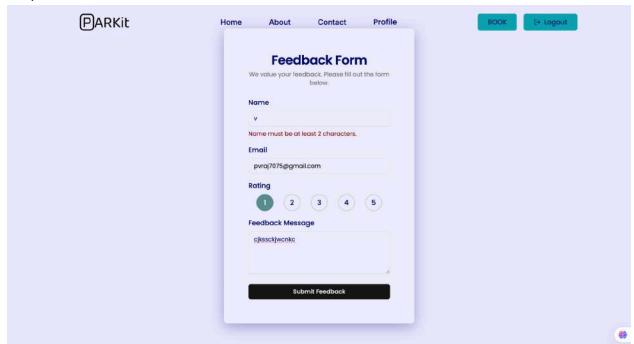
4.Feedback form

Test-1 Name: v

Email:pvraj7075@gmail.com

Rating:1

Feedback message:cjkssckjwcnkc

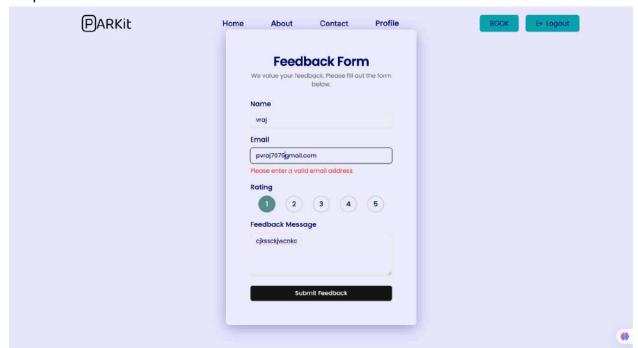


Name: vraj

Email: pvraj7075gmail.com

Rating:1

Feedback message:cjkssckjwcnkc

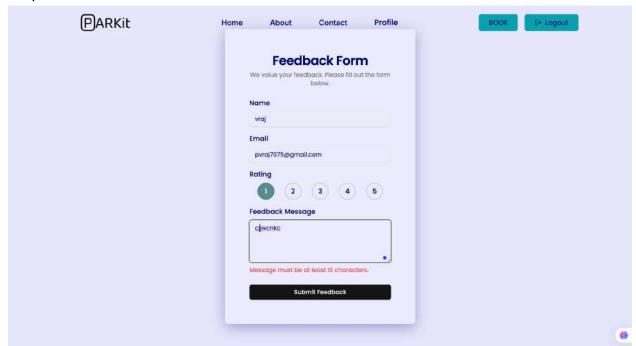


Name: vraj

Email: pvraj7075@gmail.com

Rating:1

Feedback message:cjjwcnkc

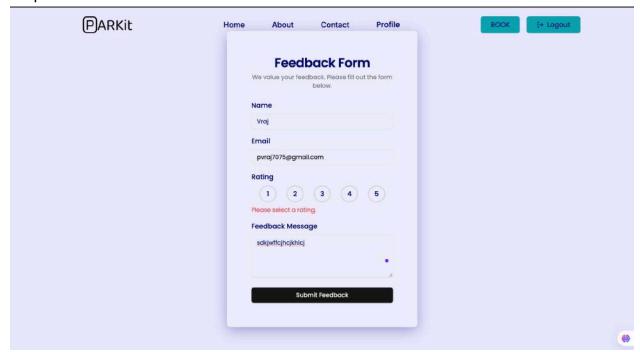


Name: vraj

Email: pvraj7075@gmail.com

Rating:1

Feedback message:cjjwcnkcjkchsc



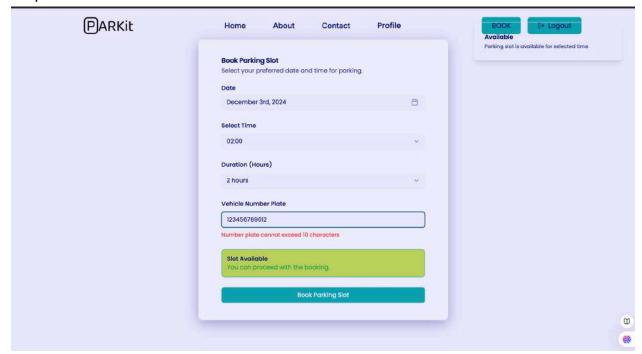
5.Booking parking slot

Test-1

Date: December 3rd,2024

Select time: 2:00 Duration: 2 hours

Vehicle Number Plate: 123456789012



Date: December 3rd,2024

Select time: 2:00 Duration: 2 hours

Vehicle Number Plate: 12345678

